SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 06543/008002	SERIAL NO. 08/878,396

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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APPLICANT
Andrew C. Payne et al.

FILING DATE
June 18, 1997

GROUP 2414 A.U. 2766

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
𝐵𝐸𝑀	AA	4	3	0	5	0	5	9	12/1981	Benton	340	825.33	
𝐵𝐸𝑀	AB	4	5	7	8	5	3	0	03/1986	Zeidler	178	22.09	
𝐵𝐸𝑀	AC	4	7	3	4	8	5	8	03/1988	Schlafly	364	408	
𝐵𝐸𝑀	AD	4	7	5	5	9	4	0	07/1988	Brachtl et al.	364	408	
𝐵𝐸𝑀	AE	4	7	7	5	9	3	5	10/1988	Yourick	364	401	
𝐵𝐸𝑀	AF	4	7	9	5	8	9	0	01/1989	Goldman	235	380	
𝐵𝐸𝑀	AG	4	7	9	9	1	5	6	01/1989	Shavit et al.	364	401	
𝐵𝐸𝑀	AH	4	8	1	2	6	2	8	03/1989	Boston et al.	235	380	
𝐵𝐸𝑀	AI	4	8	2	7	5	0	8	05/1989	Shear	380	4	
𝐵𝐸𝑀	AJ	4	9	2	2	5	2	1	05/1990	Krikke et al.	379	95	
𝐵𝐸𝑀	AK	4	9	3	5	8	7	0	06/1990	Burk, Jr. et al.	364	200	
𝐵𝐸𝑀	AL	4	9	4	7	0	2	8	08/1990	Gorog	235	381	
𝐵𝐸𝑀	AM	4	9	7	7	5	9	5	12/1990	Ohta et al.	380	24	
𝐵𝐸𝑀	AN	4	9	8	2	3	4	6	01/1991	Girouard et al.	364	550	
𝐵𝐸𝑀	AO	4	9	9	2	9	4	0	02/1991	Dworkin	364	401	
𝐵𝐸𝑀	AP	5	0	2	5	3	7	3	06/1991	Keyser, Jr. et al.	364	408	
𝐵𝐸𝑀	AQ	5	0	6	0	1	5	3	10/1991	Nakagawa	364	405	
𝐵𝐸𝑀	AR	5	0	7	7	6	0	7	12/1991	Johnson et al.	358	86	
𝐵𝐸𝑀	AS	5	2	2	0	5	0	1	06/1993	Lawlor et al.	364	408	
𝐵𝐸𝑀	AT	5	2	4	7	5	7	5	09/1993	Sprague et al.	380	9	
𝐵𝐸𝑀	AU	5	3	0	5	1	9	5	04/1994	Murphy	364	401	03/1992
𝐵𝐸𝑀	AV	5	3	1	1	5	9	4	05/1994	Penzias	380	24	03/26/1993
𝐵𝐸𝑀	AW	5	3	2	1	7	5	1	06/1994	Ray et al.	380	24	02/18/1993
𝐵𝐸𝑀	AX	5	3	3	6	8	7	0	08/1994	Hughes	235	379	05/1992
𝐵𝐸𝑀	AY	5	3	4	1	4	2	9	08/1994	Stringer et al.	380	23	12/04/1992
𝐵𝐸𝑀	AZ	5	3	4	7	6	3	2	09/1994	Filepp et al.	395	200	07/28/1989
𝐵𝐸𝑀	AAA	5	3	5	1	1	8	6	09/1994	Bullock et al.	364	401	01/1991
𝐵𝐸𝑀	AAB	5	3	5	1	2	9	3	09/1994	Michener et al.	380	21	02/1993
𝐵𝐸𝑀	AAC	5	3	8	3	1	1	3	01/1995	Kight et al.	364	401	07/1991
𝐵𝐸𝑀	AAD	5	4	1	4	8	3	3	05/1995	Hershey et al.	395	575	10/1993

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BCY	BA	5	5	5	7	5	1	6		09/1996	Hogan	364	406	02/04/1994
BEY	BB	5	5	5	7	5	1	8		09/1996	Rosen	380	24	04/28/1994
BEY	BC	5	5	9	0	1	9	7		12/1996	Chen et al.	380	24	04/04/1995
BEY	BD	5	5	9	6	6	4	2		01/1997	Davis et al.	380	24	09/30/1994
BEY	BE	5	5	9	6	6	4	3		01/1997	Davis et al.	380	24	01/03/1994
BEY	BF	5	6	0	4	8	0	2		02/1997	Holloway	380	24	07/18/1994
BEY	BG	5	6	2	1	7	9	7		04/1997	Rosen	380	24	12/19/1995
BEY	BH	5	6	2	3	5	4	7		04/1997	Jones et al.	380	24	03/06/1995
BEY	BI	5	6	4	2	4	1	9		06/1997	Rosen	380	24	12/19/1995
BEY	BJ	5	7	1	5	3	1	4		02/1998	Payne et al.	380	24	10/24/1994
BEY	BK	5	7	2	4	4	2	4		03/1998	Gifford	380	24	12/16/1993

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
BEY	BL	0-542-298-A2	05/1993	Europe EPO	G07F7	10	98 AUG 3	
BEY	BM	2,102,606	02/1983	United Kingdom	G07F7	10		
BCY	BN	WO 91/16691	10/1991	W.I.P.O.	G07F7	10		

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

BEY	BO	Abadi, M. et al.; "Authentication and Delegation with Smart-Cards" Report 67; Systems Research Center; Digital Equipment Corporation; Palo Alto, California; October 22, 1990, revised July 30, 1992
BEY	BP	American National Standard; "Financial Institution Retail Message Authentication"; ANSI X9.19; 1986
BEY	BQ	American National Standard; "Interchange Message Specification for Debit and Credit Card Message Exchange Among Financial Institutions"; ANSI X9.2; 1988
BEY	BR	Anderson, Ross J.; "UEPS - A Second Generation Electronic Wallet"; Proc. of the Second European Symposium on Research in Computer Security (ESORICS); Touluse, France; pp. 411-418; November, 1992

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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

BEY		Anderson, Ross ; "Why Cryptosystems Fail"; Proc. 1st Conf. Computer and Comm. Security; pp. 215-227; November, 1993
BEY	CB	Bank Administration Institute; Payment Systems in Eleven Developed Countries; "United States"; pages 215-235; 1989
BEY	CC	Batelaan; Butler; Chan; Chen; Evenchick; Hughes; Jen; Jeng; Millett; Riccio; Skoudis; Starace; Stoddard; "An Internet Billing Server Prototype Design"; Carnegie Mellon University; 1992
BEY	CD	Batelaan; Butler; Chan; Chen; Evenchick; Hughes; Jen; Jeng; Millett; Riccio; Skoudis; Starace; Stoddard; "An Internet Billing Server: System Requirements"; Carnegie Mellon University; Master of Science thesis; 1992
BEY	CE	Bellcore Internal E-Mail, November 24, 1993
BEY	CF	Bender, M.; "EFTS: Electronic Funds Transfer Systems"; Kennikat Press; Port Washington, New York; pp. 43-46; 1975
BEY	CG	Bodner; Carlos; Evans; Garcia; Ha; Harris; Reece; Russo; Sekino; Walker; "An Internet Billing Server: Analysis of Distributed Computing and Cross Platform Issues"; Carnegie Mellon University; thesis; 1993
BEY	CH	Bodner; Carlos; Evans; Garcia; Ha; Harris; Reece; Russo; Sekino; Walker; "An Internet Billing Server: Availability, Reliability & Scalability Issues in the MS4 Billing Server Design & Prototype"; thesis; 1993
BEY	CI	Bodner; Carlos; Evans; Garcia; Ha; Harris; Reece; Russo; Sekino; Walker; "The Internet Billing Server: Design Document"; Carnegie Mellon University Information Networking Institute; Master of Science thesis; 1993
BEY	CJ	Bodner; Carlos; Evans; Garcia; Ha; Harris; Reece; Russo; Sekino; Walker; "The Internet Billing Server: Prototype Requirements"; Carnegie Mellon University Information Networking Institute; thesis; 1993
BEY	CK	Bos et al.; "SmartCash: A Practical Electronic Payment System"; pp. 1-8; August, 1990
BEY	CL	Bürk et al.; "Value Exchange Systems Enabling Security and Unobservability"; Computers & Security, 9; pp. 715-721; 1990
BEY	CM	Chaum et al.; "Achieving Electronic Privacy"; Scientific American; pp. 319-327; 1988
BEY	CN	Chaum, D.L. et al.; "Implementing Capability-Based Protection Using Encryption; Electronics Research Laboratory, College of Engineering, University of California, Berkeley, California; July 17, 1978

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DA	Chaum et al.; "Untraceable Electronic Cash"; Advances in Cryptology; pp. 319-327; 1988	
DB	Cohen, Danny; "Computerized Commerce"; ISI Reprint Series ISI/RS-89-243; October, 1989; Reprinted from Information Processing 89, Proceedings of the IFIP World Computer Congress, held August 28 - September 1 1989	
DC	Cohen, Danny; "Electronic Commerce"; University of Southern California, Information Sciences Institute, Research Report ISI/RR-89-244; October, 1989	
DD	Compuserve International; Compuserve Information Service Users Guide; pp. 109-114; 1986	
DE	Computer Shopper; "Internet for Profit"; pages 180-182, 187, 190-192, 522-528, 532, 534; November, 1994	
DF	Davies, D.W. and Price, W.L.; "Security for Computer Networks: An Introduction to Data Security in Teleprocessing and Electronic Funds Transfer"; John Wiley & Sons; December 5, 1985; pages 304-336	
DG	Dukach, Semyon; "SNPP: A Simple Network Payment Protocol"; MIT Laboratory for Computer Science; Cambridge, Massachusetts; 1993	
DH	Even et al.; "Electronic Wallet"; pp. 383-386; 1983	
DI	Gifford, David and Spector, Alfred; "Case Study: The CIRRUS Banking Network"; Comm. ACM 8, 28' pp. 797-8078; August, 1985	
DJ	Gifford, David K.; "Cryptographic Sealing for Information Secrecy and Authentication"; Stanford University and Xerox Palo Alto Research Center; Communications of the ACM; Vol. 25, No. 4; April, 1982	
DK	Gifford, David; "Notes on Community Information Systems" MIT LCS TM-419; December, 1989	
DL	Gligor, Virgil D. et al.; "Object Migration and Authentication"; IEEE Transactions on Software Engineering; Vol. SE-5, No. 6; November, 1979	
DM	Harty et al.; "Case Study: The VISA Transaction Processing System"; 1988	
DN	Information Network Institute, Carnegie Mellon University; Internet Billing Server; Prototype Scope Document; October 14, 1993	

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/BEy/	EB	International Organization for Standardization; "International Standard: Bank Card Originated Messages - Interchange Message Specifications - Content for Financial Transactions"; ISO 8583; 1987	
/BEy/	EC	Intuit Corp Quicken User's Guide; "Paying Bills Electronically"; pp. 171-192; 1993	
/BEy/	ED	✗ Jansson, Lennart; "General Electronic Payment System"; 7th Proceedings of the International Conference on Computer Communication; Pages 832-837; 1985	
/BEy/	EE	Krajewski, M. et al.; "Applicability of Smart Cards to Network User Authentication"; Computing Systems; Vol. 7, No. 1; 1994	
/BEy/	EF	Krajewski, M.; "Concept for a Smart Card Kerberos"; 15th National Computer Security Conference; October, 1992	
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/BEy/	EH	Lampson, Butler; Abadi, Martin; Burrows, Michael; and Wobber, Edward; "Authentication in Distributed Systems: Theory and Practice"; ACM Transactions on Computer Systems; Volume 10, Number 4; November, 1992; pp. 265-310	
/BEy/	EI	Mak, Stephen; "Network Based Billing Server"; Carnegie Mellon University Information Networking Institute; Masters of Science thesis; 1991	
/BEy/	EJ	Medvinsky et al.; "Electronic Currency for the Internet"; Electronic Markets; pp. 30-31; September, 1993	
/BEy/	EK	Medvinsky et al.; "NetCash: A Design for Practical Electronic Currency on the Internet"; Proc. 1st ACM Conf. on Comp. and Comm. Security; November, 1993	
/BEy/	EL	Miller, S.P.; Neuman, B.C.; Schiller, J.I.; Saltzer, J.H.; "Kerberos Authentication and Authorization System"; Project Athena Technical Plan, Section E.2.1; Massachusetts Institute of Technology; October, 1988	
/BEy/	EM	Mosaic Communications Corp. press release; "Mosaic Communications Unveils Network Navigator and Server Software for the Internet"; September 12, 1994	
/BEy/	EN	Needham, Roger M. and Schroeder, Michael D.; "Using Encryption for Authentication in Large Networks of Computers"; Communications of the ACM; Volume 21, Number 12; December, 1978; Pages 993-999	

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/BE-/	FA	National Westminster Bank Group; "Clearing House Automated Payments System"; pp. 1-29 , *NO DATE*
/BE-/	FB	Needham, Roger M.; "Adding Capability Access to Conventional File Servers"; Xerox Palo Alto Research Center; Palo Alto, California; *NO DATE*.
/BE-/	FC	Neuman, B. Clifford; "Proxy-Based Authorization and Accounting for Distributed Systems"; Proceedings of the International Conference on Distributed Computing Systems; May 25-28, 1993; Conf. 13; IEEE pages 283-291
/BE-/	FD	Okamoto et al.; "Universal Electronic Cash"; pp. 324-337; 1991
/BE-/	FE	Pfitzmann et al.; "How to Break and Repair a 'Provably Secure' Untraceable Payment System"; pp. 338-350; 1991
/BE-/	FF	Rescorla, E. and Schiffman, A.; "The Secure HyperText Transfer Protocol"; Enterprise Integration Technologies; June, 1994
/BE-/	FG	Rivest, R.; "The MD5 Message-Digest Algorithm"; MIT Laboratory for Computer Science and RSA Data Security, Inc.; April, 1992
/BE-/	FH	Rivest, R.L. et al., "A Method for Obtaining Digital Signatures and Public-Key Cryptosystems," Laboratory for Computer Science, Massachusetts Institute of Technology, Cambridge, Massachusetts
/BE-/	FI	Schamüller-Bichl, I.; "IC-Cards in High-Security Applications"; Selected Papers from the Smart Card 2000 Conference; Springer Verlag; pp. 177-199; 1991
/BE-/	FJ	Sirbu, Marvin A.; "Internet Billing Service Design and Prototype Implementation"; An Internet Billing Server; pp. 1-19; 1993
/BE-/	FK	Society for Worldwide Interbank Financial Telecommunications S.C.; "A S.W.I.F.T. Overview"
/BE-/	FL	Tenenbaum, Jay M. and Schiffman, Allan M.; "Development of Network Infrastructure and Services for Rapid Acquisition"; adapted from a white paper submitted to DARPA by MCC in collaboration with EIT and ISI
/BE-/	FM	Vittal, J. "Active Message Processing: Messages as Messengers"; pp. 175-195; 1981
/BE-/	FN	Voydock, Victor et al.; "Security Mechanisms in High-Level Network Protocols"; Computing Surveys; Vol. 15, No. 2; June, 1981

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Substitute Disclosure Form (PTO-1449)